



Planetary Data System

Atmospheres Node

Reta Beebe
Nancy Chanover
Lyle Huber
Lynn Neakrase

**MC Face-to-Face
Tucson AZ
10-11 April, 2014**

Missions in Development

- Juno - Orbit Insertion – July 5 2016
 - SIS development is well along in signature phase
 - Sample data sets are being developed
 - Peer reviews anticipated for earth flyby data near end of year
 - Issues – Bill Kurth is leading the archiving and as usual doing an excellent job
- MAVEN –Arrive at Mars Sept 21, 2014
 - SIS development is nearing completion
 - Sample data sets are being developed
 - Peer reviews anticipated late summer
 - Issues – Dave Mitchell is leading the archiving and recently has realized time is short and is starting to push.
- InSight –Arrive at Mars late 2016
 - APSS/ATMOS telecons and development are underway

Active Missions

- Cassini
 - Archiving is progressing on schedule
 - Data sets are archived in accumulating mode
 - PDS is providing support for senior review
 - Issues – The mission maintains a strong commitment for archiving and interacts with the PDS effectively
- LADEE – on extended mission – may last to Apr 21
 - SISs & sample data sets reviewed
 - NMS has delivered a full PDS4 sample bundle
 - Data delivery of primary mission and peer reviews are scheduled to make data available for LDAP – end of August for Oct 1st proposal deadline
 - Issues – Greg Delory is leading the archiving and is proactive and doing an excellent job.
- VeSpR – Will deliver in June
 - This is a tiny data set and will be archived in “UV mode” –based on FITS format – ASCII tables

Active Missions

- Venus Express
 - Maintain help pages that link into the PSA data
 - Host Radio Science data down-linked via DSN and processed by Dick Simpson – recently peer reviewed
- Huygens
 - Cassini supported timeline products by Ralph Lorenz and revision and additions to DISR imaging data by Chuck See
 - Lorenz product were integrated into user's pages
 - Peer review is underway of Lorenz and See data
- Mars Missions – in accumulating mode
 - MSL/REMS Delivery 5 released
 - MRO/MCS Delivery released
 - MEX/PFS & SPICAM available at ATM (and ESA)
- Messenger/MASCS Delivery 11 released

Migration

- PDS4 Migration For FY2014
 - Finalizing migrated data sets
 - Phoenix (5) (V1.1.0.0)
 - MET, LIDAR, ASE, AO, TT
 - Mars Reconnaissance Orbiter (1) (V1.1.0.0)
 - ACC
 - Missions for rest of FY14
 - All accelerometer data (accommodate MAVEN)
 - Mars data based on quality (accommodate MAVEN)
 - Begin Messenger data (accommodate Messenger & LADEE)
 - Messenger MASCS is interested in having data in PDS4
 - Address large data set migration
 - Work on user access
 - Migration in FY15
 - Accommodate Juno
 - Complete Mars holdings

Migration

- Issues, Concerns - What do we do with PDS3 labels in PDS4?
 - Our Solution is
 - Co-locate PDS3 & 4 labels with data at the file level
 - PDS4 product label will describe multiple files including data file, PDS3 label, FMT file(s) (if necessary), etc.
 - This group of products would then have **1** LID/VID and will be registered once
- This will allow nodes the option to deliver PDS3, PDS4 labels or both to the user.

Atmospheres Archive

- Data Holdings and Deliveries
 - Current volume/Data Sets (PDS3/PDS4)
 - 3.5 TB archived
 - 243 data sets on 896 archive volumes
 - Expected volume (through October 1 2014)
 - With LADEE being archived and adding to regular deliveries, we expect close to 1 TB in this time frame.
 - NSSDC deliveries completed and expected
 - NSSDC has all of our archives except the most recent deliveries. On the whole delivery has gone smoothly.

Security

- Disaster Recovery Plans/Updates
 - Multi-copies NMSU, SDSC, NSSDC
 - Systematic backup performed quarterly
- IT security planning
 - NMSU IT has been secure, firewall managed by NMSU keeps out threats.
 - Development sites are not linked to users port
 - Outside access extremely limited
- Issues, Concerns
 - NMSU has not been hacked
 - NMSU IT gives us individualized service

Development Activities

- Staff time (WY) supporting DDWG activities including tiger teams
 - Lyle Huber – DDWG- 2 hours/week
 - Lyle Huber - Primary_Result_Summary Tiger Team
- Staff time (WY) supporting CCB
 - Lynn Neakrase – Chair (2-3 hours/week)
 - Coordination with Emily on readiness of SCRs
 - Double-checking SCRs for appropriateness for CCB
 - Send out telecon announcement Thurs before telecon
 - Telecon always on Tues (8:30am Pacific)
 - Results sent out within a few hours of telecon
 - Emily and Lynn monitor implementation of CCB decision
 - Student effort 3 student average 15 hrs./week

Development Activities

- Next 5 YEARS 2015-2019
 - Prediction of archive growth – 3.5 TB
 - New Challenges for PDS4
 - Based on Mission interactions and migration activities we are mildly confident that we can handle data suppliers
 - User Accommodation – optimize transparency
 - Optimize the use of PDS4 in the ATMOS node
- Tools Sean provides that we've partially tested
 - Registry Services
 - Validate (tested on migrated sets)
 - Harvest (tested on migrated sets)
 - Transport (limited testing – working on interfacing)
 - XML-Related Services
 - Early command-line translation software to XML → ODL-Like

Development Activities (Cont.)

- New tools that you would like to see
 - Developed by the nodes
 - Optimal translation of XML labels
 - Web interfaces to Sean's tool packages (search & retrieval)
 - Someone else
 - At this time we are not familiar enough with the system to determine what will be needed.